

Today's Topics:

AM BC antennas on 160m
Encryption, control, other random thoughts....
Mac vs. IBM: IBM wins
pudgy wound helical antenna (60m vertical in my living room!)

Date: 13 Dec 89 06:14:46 GMT

From: tank!cps3xx!usenet@handies.ucar.edu (Usenet file owner)

Subject: AM BC antennas on 160m

Message-ID: <5777@cps3xx.UUCP>

In article <101934@ti-csl.csc.ti.com> hoenig@tilde.UUCP (Mike Hoenig) writes:

> I want to operate 160m as well as WARC. In Crockett, TX, is a 250'
> AM broadcast tower waiting for a good rig to attach. My father-in-
> law owns/operates KIVY AM/FM, and the AM side goes off-the-air for a
> clear-channel sister station every evening around sunset. Give me a
> transmatch and 100W and I'll be happy!!
> Mike

I did this quite a few years ago when I still operated on the HF bands.
I was the chief engineer for WMPL/WZRK in Hancock, MI. One December,
when the AM daytimer was off the air, I used their antenna on 160m
during the 160m contest. It was very cold in the transmitter shack with
only tube finals for heat, but I had a very good signal.

In the rare case that original ideas are found here, I am responsible.
Internet: kjh@usc.edu

Kenneth J. Hendrickson N8DGN
Owen W328, E. Lansing, MI 48825
UUCP: ...!uunet!usc!pollux!kjh

Date: Tue, 12 Dec 89 22:38 EST

From: GWYFFD <PERRYR%WABASH.BITNET@UICVM.uic.edu>

Subject: Encryption, control, other random thoughts....

Gentlemen and Ladies:

Encryption of cellular phones does not have to be complex. Neither does
it have to be unbreakable. Even a simple, easily breakable scheme would solve
the problems of the ECPA. My reasoning is this. The intended purpose of the
ECPA was to protect the privacy of cell-phone users. The ECPA chose to do that
by saying "you can't listen to them." If a encryption/digital coding system
were to be used, however simple, to make the voice unintelligible to the
"casual" listener, then the purpose of the EPCA will have been achieved. The

person who takes the "extra step" to decode these transmissions is easily seen as having "criminal intent". And of course, none of US will do that. Make the penalties for decoding the transmissions the same as for an illegal wiretap. It in effect does the same thing. This idea, of course, is Santayannaish and unenforceable, but it does solve the problem without the dangerous precedent of the FCC being able to decide what we can and cannot listen to.

Related to that...can anybody tell me of a valid reason to listen to the cell-phone stuff anyway outside of sheer Mrs Grundyism (Mrs Grundyism = the uncontrollable urge to mind other people's buisness....)? Does it have any public service function? 90% of the stuff is utterly boring anyway, or so I would assume from my own use of the telephone....

As for this list being out of control.... I say keep it wild and wooly. Yes, a lot of this stuff is not Ham Radio, per se, but the cross postings let us see beyond the scope of our own hobby.

As for the responses I have gotten about building radios from scratch, thanks. The ones I have gotten so far have been of high quality. Keep 'em coming.

And finally...I'll be leaving for Christmass break in a few days. May all of you have a happy holiday.

All I want for Christmas is my ticket! (being processed as we speak)
Who does the FCC hire in Gettysburg, anyway! (sorry. a little flame here...)

Merry Christmass,

and 73s,

R. Todd Perry
PERRYR@WABASH

--- Isn't it interesting how lab goggles cut off your peripheral vision?

---Ryan Widebener

Date: 13 Dec 89 06:03:10 GMT
From: tank!cps3xx!usenet@handies.ucar.edu (Usenet file owner)

Subject: Mac vs. IBM: IBM wins
Message-ID: <5776@cps3xx.UUCP>

In article <8912120807.AA01074@ucbvax.Berkeley.EDU> KENDALLG@VTVM1.CC.VT.EDU ("Gary F. Kendall") writes:

>I have so far are: 1) XT vs. AT vs. 286/386 - which is best?

Get a 386 if you can afford it; otherwise get a AT/286 if you can afford it, otherwise get a XT.

> 2) 5.25 inch floppy drive - 360K, 720K or 1.2M?

360k and 1.2M disks are 5+1/4". 720k and 1.44M disks are 3.5". The 1.2M drives can read and write to the 360k disks. The 1.44M drives can read and write to the 720k disks.

The 3.5" media is very expensive. The 1.2M disks are the most cost effective media (bits/\$).

BEWARE: the high density drives (1.2M & 1.44M) have a narrower gap on the read/write head. This means that if you write to a disk with the lower density drive, then write to it with a high density drive, you may have problems reading it on a low density drive. This is because the previous data written with a low density drive will still be on the disk, and will effectively be noise.

> 3) Operating System - I know MS-DOS is the 'standard';
> what about Unix?

There are lots of programs that will run under the MSDOS system. I would recommend having at least one MSDOS system around, even though the operating system (MSDOS) has serious deficiencies.

>I realize this is really a Ham mailing list, but since I'm hoping to eventually get seriously into packet (among other things in ham radio) I'd be grateful for input from those of you who already have such systems up and running. For example, is it possible to have a TNC setup running 'background' while doing something else with the PC, like playing Adventure? :-)

It is very difficult to do this if you don't run a multitasking OS. DESQview seems to do a reasonable job for the money, however.

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Date: 12 Dec 89 07:14:35 GMT
From: ems@apple.com (Mike Smith)
Subject: pudgy wound helical antenna (60m vertical in my living room!)
Message-ID: <5731@internal.Apple.COM>

Well, I finally did it. On my first day of vacation I built my 'pudgy wound' antenna. I did a vertical to start with. It is 48 INCHES tall and resonant on 31 meters. A loading coil makes it resonant on 60 meters.

The details: 48 inches long, 4 inches in diameter, 48 turns of 20 ga. wire (insulated hookup wire), about 1" between turns. That's about 50 feet of wire. Turns spacing is not critical (at least not the way I wound it ...)

If I tap into turn #44 or #45 it is resonant on 31 meters. I have added a 10 turn loading coil on the same form (close wound, same wire type) that lowers resonance to the 60m band.

I used a 4 ft. piece of 4 inch diameter PVC pipe for the antenna and coil form. (It is designed for 'leach lines' for septic tank systems. There are two kinds, with holes and without. I used without holes. Cost was about \$5 for a 10 ft section) and regular hookup wire for the antenna wire. The prototype just uses strapping tape to hold the turns in place. A finished version will use something more durable...

I learned that an 'antenna bridge' does what I wanted to do (find out resonant frequency of a random object/antenna without a transmitter and swr meter) plus it gives information on impedance. I bought one made by MFJ for about \$80 and it seems to work as advertized.

Performance? The 'Pudgy wound' (my name for fat short helixes) vertical seems to be resonant over all of the 31 meter band. It does OK on 41m but doesn't do real well on 25m. It also beats my reference antenna! The impedance was about 150 ohms (I think, I used a single wire lead and wasn't too careful about measuring the impedance of the antenna).

My house has a stucco finish (i.e. chicken wire in the walls ...) and inside antennae don't usually do well. This antenna gave me my first decent signals on 60 meters!

(Oh yeah, what is my reference antenna? Well, it's my window frame. The MFJ antenna bridge reports it to be resonant from 49m all the way through 31m and OK on 25m. It has an impedance of about 250 ohms. It works startlingly well and I haven't been able to beat it with an inside antenna until now... but that is another story/investigation.)

Well, on to the future. Next experiments will be to move it outdoors and

up to the roof top; then make a dipole version. (Hmmm maybe a 120 meter dipole in 20 feet?! After that, who knows. Maybe a 'Pudgy Yaggi' for 31 meters? I may also try putting a pie tin on the top for a capacitance hat and a ground plane/radials ...

The theory? Well, remember that I'm not an engineer, but if I understand the antenna books I've read (great leap of faith!) by increasing the diameter of the turns in the helix (making it 'pudgy') I have reduced the inductance. By bringing the turns closer together I have increased both the capacitance and the inductance (though I think I've had a net decrease in inductance). The net of the changes is that it has a slightly broader band of resonance than a long skinny helix and has a much shorter length! If there is a real engineer who can do the comparison of a 1.5" diameter 20 ft. helix vs. a 4" x 4ft. helix I would like to know what is really going on... (I suspect that the model degenerates into a straight wire at one extreme { zero diameter helix} and a loop at the other {as in quads and full wave loops. one turn of a 'helix' with zero pitch} with a pudgy helix being closer to a loop in behavior than to a 1/4 wave wire.)

I havn't had alot of experience at evaluating antenna designs. If someone with more experience (and perhaps a transmitter and field strength meter) would like to test one of these out, it doesn't take much time to knock one together. I would love to know how it stacks up against a 'real' vertical or a 'real' dipole!

In the mean time, I'm rather tickled with my space saving antenna. I think it is an original variation on the helical wound antenna theme, but then again there is so little that hasn't been tried somewhere by someone... Please let me know if pudgy helicals are of any use to anyone. (or if I'm re-inventing the oil lamp in the electronic age ...)

--

E. Michael Smith ems@apple.COM

'Whatever you can do, or dream you can, begin it. Boldness has genius, power and magic in it.' - Goethe

I am not responsible nor is anyone else. Everything is disclaimed.

End of INFO-HAMS Digest V89 Issue #1011
